

## **CHAPTER 3 - MID-COAST PROPERTIES LOT**

### **PROPERTY DESCRIPTION AND LAND USE HISTORY**

The Mid-Coast Properties lot is located in the northeast side of Appleton. It is on the west side of West Appleton Road, about 1½ miles south of the Searsmont town line and 2.1 miles south of Route 173 (Woodman's Mills). Road frontage is 317'. The property extends about 3,700' northwesterly towards the Dead Brook. All of the lot's 45 acres is wooded except for a 1-acre grass and shrub swamp. Forested wetlands account for 5 acres. A stream in a ledgy ravine flows southwestward through the parcel.

As with most woodland in this area of Maine, the ownership was farmland (mostly as pasture) a century and a half ago. Some stone walls and barbed wire fences are present, both internally and on some boundaries. The lot is part of a larger subdivision by the First Atlantic Land Company, Inc., itself a portion of the estate of Ida Mae Collamore. A woods road cuts across the middle of the lot. It is part of a snowmobile trail system and is known as The Nature Conservancy Trail. The property has been commercially harvested about 40 years ago, as well as more recently in the front half, about 15 years ago. The town of Appleton took title of the lot in 1993 as a "tax acquired property."

The property is in a rural landscape of mostly forest with a few houses and fields along the town road. The Appleton Bog and Newbert Pond are only about ½ mile to the southwest. The bog and pond both flow into the Dead River, which flows through additional wetlands ¼ mile to the north. The lot on the north was cut 15-20 years ago while west-abutting lot was harvested within the past 5 years.

### **TOPOGRAPHY AND ACCESSIBILITY**

The terrain of the property consists mostly of gentle to moderate slopes. Small steep ledges border the swampy ravine through which the stream flows on its way to the larger swamp adjacent to Newbert Pond. Another seasonal stream feeds the ravine, draining a swamp from the south. The highest elevation is along the northeast boundary at about 345'. The lowest point is 300', which defines the edge of the Newbert Pond swamp. Occasional ledge is exposed on some of the slopes.

Excellent access into the lot is from W. Appleton Road. However, 3 wetlands present obstacles to easily access deeper sections of the property. The first, relatively small, is 200-300' in from the road. It may be able to be crossed when frozen, but to avoid it permission can be sought to use the abutting wood yard on the other side of the northeast boundary. A larger hardwood swamp sits where the lot widens out. The east end could probably be squeezed around during frozen conditions. An old skid road could then be used to cross the stream back into the middle of the lot. When harvested, this middle part was accessed from

Lot 11 on the First Atlantic Land Co.'s survey. The ravine is the most significant impediment to accessing the lot's back half. It extends the whole width of the property, has steep ledgy sides and a swamp on the bottom. Permission should be sought to travel through the abutting lot to the northeast to go around the ravine.

## BOUNDARIES

The property was surveyed by Michael Sackett, of Sackett & Brake Survey, Inc., from Skowhegan, ME. The date of the plan is Jan. 16, 1987. All but 2 corners are marked with a rebar & surveyor's cap. The north corner has an old 1½" iron pipe. A chiseled "X" is supposedly on the ledge above the ravine, but wasn't found. The rebar along the road marking the south corner also was not found. All lines have been ax blazed and painted yellow, as well as flagged. The northwest line also has orange paint spots.

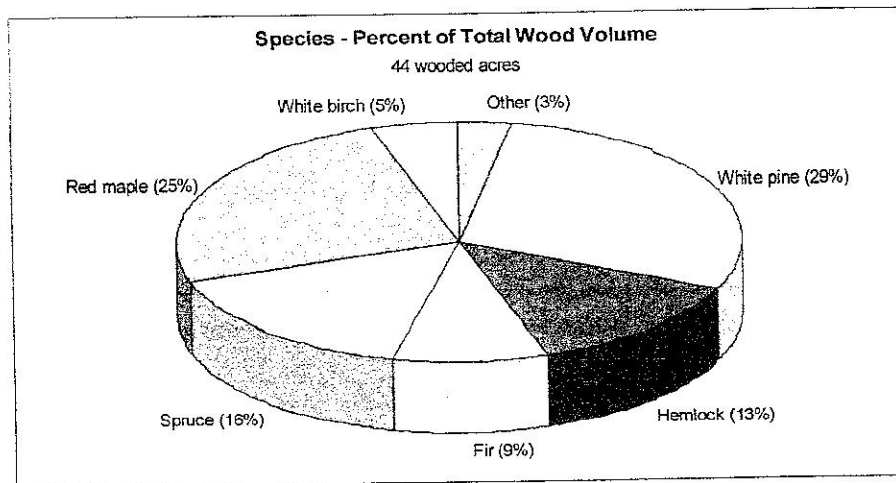
## TIMBER RESOURCE

Forests cover 44 acres of the Mid-Coast Properties lot. An open shrub/grass swamp with no wood volume accounts for 1 acre. Stand 3 (in 3 separate units) is a forested wetland, while the others are on drier uplands. The distribution of timber type among the 7 forested stands are:

<u>Type</u>	<u># of stands</u>	<u># of acres</u>	<u>% of total</u>
Softwood	4	19	43
Mixedwood	1	20	45
Hardwood	<u>1</u>	<u>5</u>	<u>12</u>
	6	44 acres	100%

In March, 2001, inventory data were taken in the forested areas at 23 variable radius plots on cruise lines running parallel to the southwest boundary. One plot represents an average of 1.9 acres. The overall volume estimate is accurate within ±14% nine times out of ten. Error is greater for individual species, products, and values.

The following graph shows a breakdown of total wood volume among species. Softwood makes up 69% of the volume. Two species with the most volume are white pine and red maple. Moderate volume species are spruce, hemlock and fir. Less common species present include white birch, cedar, aspen and yellow birch.



Forest stands are further identified based on dominant canopy height and canopy closure. Much of the woodland is made up of poletimber size trees that are 40-60 years old. Larger sawtimber trees are lightly mixed in, as are saplings both in open patches and in the understory. Canopy heights are moderate with only a few scattered taller individuals. Most of the forest canopy is fully or moderately closed. There are occasional open pockets containing younger saplings and stump sprouts. The exception is stand 5 where the overstory canopy is sparse and a thick level of saplings are close to the ground.

Tree quality, defined as trees with the potential to become sawtimber, is below average. Most of the unacceptable trees are fir, which virtually always is considered pulpwood, due to its predisposition towards early onset of internal rot. The past logging probably picked out the better trees and left those of poorer quality behind. Many of the pines exhibit an open-grown form with many large lower limbs and multiple stems, which degrade the tree's quality. There are, however, certainly some nice individual stems scattered through the lot. Some of the stems are designated as pulp due only to small size and is actually good quality growing stock. White pine and red spruce are the most valuable species. Through a program of cutting the poor quality individuals and favoring the better trees, overall tree quality will be maintained or improved over time.

The estimated total wood volume on the Mid-Coast Properties lot is 77,000 board feet of sawtimber and 885 cords of pulpwood. This is worth about \$13,800. For the 44 wooded acres, this comes to 1,760 board feet and 20 cords per wooded acre, which is below average for forests in this part of Maine. The wood is valued at about \$314/acre, also below average. Sawtimber volume is dominated by softwood (98%), primarily pine. The pulpwood volume is more evenly divided, but softwoods still represent 2/3. Sawlogs comprise 15% of the total commercial wood volume, which is on the low side of average. This percentage will increase over time if the good quality small sawtimber is allowed to continue to grow rather than cut prematurely.

Assuming an average growth rate of 0.6 cord per acre per year, a sustainable harvest level of 23½ cords per year is calculated for the 39 acres of the drier upland stands (1, 2, 4-6). For a 15-year cutting cycle, 350 cords can then be harvested. This is only a broad total. Due to variability of age, structure and stocking of the forest types, harvest levels will vary among stands. Some may not be cut at all, while others may possibly experience a heavy regeneration cut.

Tree regeneration is mostly the very shade tolerant fir, present as both seedlings and saplings. Spruce is a distant second, with small amounts of white pine, red maple and hemlock in spots. The density of the regeneration depends on light/shade conditions and wetness on the forest floor.

With the deep snow, it was hard to describe shrubs, herbaceous plants and ferns. The only obvious observations were alder and winterberry in the wooded swamps.

## **INSECT, DISEASE AND WEATHER INFLUENCES**

No significant insect or disease conditions were noted on the Mid-Coast Properties lot. If anything, the most serious pathological event is simply the physiological maturity of the fir and its current decline and mortality. There is a minor amount of white pine blister rust. Plus, several of the open-grown pines, both large and mid-sized, have been weeviled and possess limby multiple stems.

## **WILDLIFE**

The Mid-Coast Properties lot provides several different habitats for wildlife. Fresh water is a critical habitat element for mammals, waterfowl, birds, fish, reptiles and amphibians. The 2 streams run approximately 1,200' through the property. The west end of the ravine is part of Maine Wetland #127, a forested wetland. Old beaver chewings are present, but there is no recent activity. In addition to the ravine, there are 2 other forested wetlands (all identified as stand 3), plus a 1-acre open shrub and grass swamp. Smaller swamp pockets are located in the front of the lot, as well as along its west boundary. Waterfowl and other water-based animals are probable visitors to these wetlands.

Other wildlife habitat features include small pockets of dense softwood canopy, dense ground level softwood saplings, cedar, aspens, snags and cavity trees. Deer is common. A fresh carcass was found, probably killed by coyotes that have been heard by a nearby resident. Intact softwood canopy serves as good potential winter yarding areas for deer, but they may be too small to be fully functional.

The Maine Department of Inland Fisheries and Wildlife has identified ME wetland #127 as a Critical Wildlife Habitat. This covers just the west end of the ravine. It is Waterfowl and Wading Bird Habitat #1W1 and has a low habitat value. Most of the lot (all except for the front thin neck) falls within Deer Wintering Area #1D5, of indeterminate value. No evidence of threatened or endangered plants or animals was noted during the fieldwork. The swamps would be focused areas of concern for these. Should such plants or animals be discovered, appropriate measures should be adopted to ensure protection of their habitat.

## **RECREATION AND AESTHETICS**

The biggest recreational use of the property is probably the snowmobile trail during the winter. Neighbors walk the south skid road. The property is not posted and is probably hunted. Parking is limited to the sides of the town road and the neighboring old wood yard. Significant aesthetic features include the ravine and the shrub swamp.

## **LEGAL RESTRICTIONS**

The entire perimeter of the Newbert Pond swamp (ME wetland #127) is zoned as Resource Protection. See the General Chapter for details.

# ESTIMATES OF TIMBER VOLUMES AND VALUE BY SPECIES

Town of Appleton - Mid-Coast Properties Lot  
Appleton, Maine  
March 24, 2001

Products, Species	Volume <sup>1,2</sup>	Stumpage <sup>3</sup> Rate	Value <sup>4</sup>
Sawtimber:	MBF	\$ per MBF	
White pine, grade	42	\$120	\$5,040
White pine, pallet	10	50	500
Hemlock	10	50	500
Spruce	14	100	1,400
White birch	1	80	80
Totals:	77 mbf		\$7,520
Pulpwood:	Cords	\$ per cord	
Spruce-fir	230	\$12	\$2,760
White pine	200	4	800
Cedar	25	0	0
Hemlock	115	6	690
Hardwood pulp*	185	4	740
Firewood*	130	10	1,300
Totals:	885 cords		\$6,290

**Total Estimated Stumpage Value = \$13,810**

<sup>1</sup> Total timber volume estimate is  $\pm 7\%$  nine times in ten. Error is greater for individual species or products.

<sup>2</sup> Pulpwood volumes include topwood from sawtimber trees.

<sup>3</sup> Stumpage price estimates based on recent local averages, Winter, 2001. They are gross values and do not reflect forester fees.

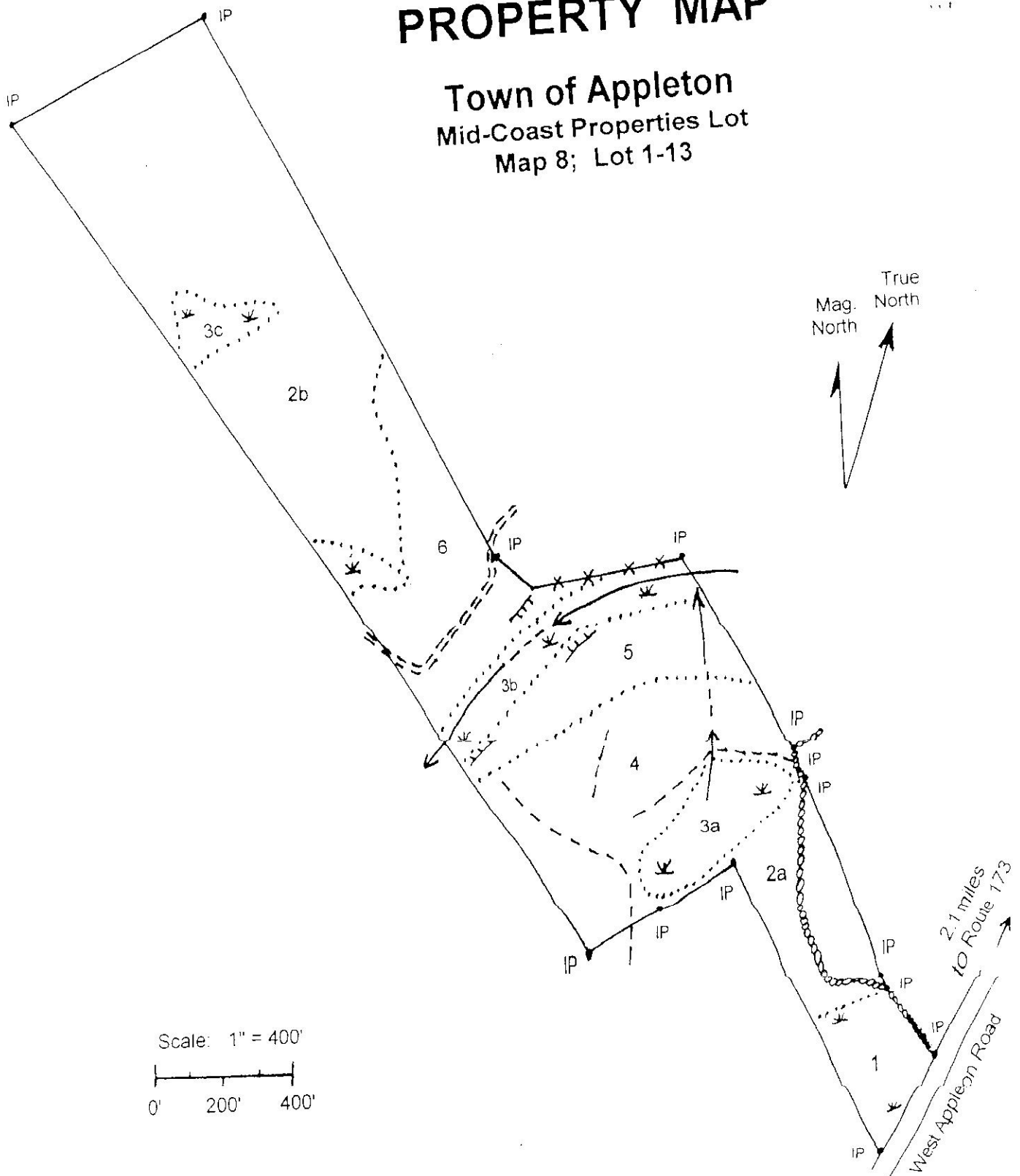
<sup>4</sup> Represents the "liquidation value" if the entire property was cleared. This is presented for illustrative purposes only and is not recommended.

\* Aspen and white birch is pulpwood; balance of the hardwood pulp is split evenly between firewood and pulp

Mitchell Kihn; LPF # 3206  
Mid-Maine Forestry

# PROPERTY MAP

Town of Appleton  
Mid-Coast Properties Lot  
Map 8; Lot 1-13



## LEGEND

Stand number and boundary	.....
Iron pin	IP •
Stone wall	oooooooooooo
Barbed wire	-x-x-x-
Skid trail	- - - -

## FOREST STANDS

Stand	Type	Acres
1	S2A Softwood poletimber	2
2	M2A Mixedwood poletimber	20
3	H2A Hardwood poletimber	5
4	S2A Softwood poletimber	8
5	S2C Softwood poletimber	3
6	S2B Softwood poletimber	6
WOODLAND		=
		44 acres

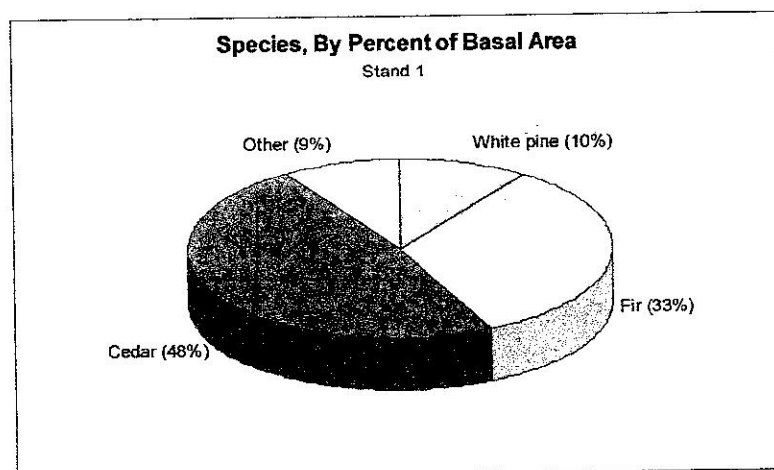
Shrub swamp 1  
TOTAL PROPERTY = 45 acres

## STAND DESCRIPTIONS AND RECOMMENDATIONS

### STAND 1 - SOFTWOOD POLETIMBER (S-2-A)

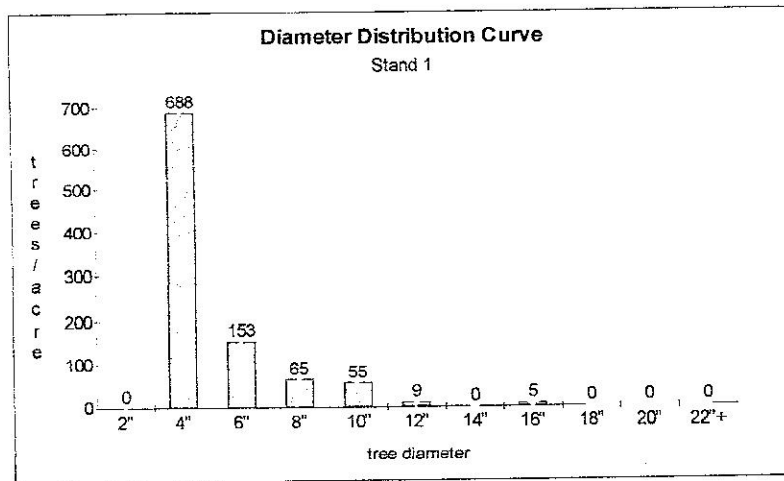
2 acres

Stand 1 is a small area in the front of the lot. It is adjacent to W. Appleton Rd., from which it can be accessed. A small swamp next to the road isolates the south corner. Another wet trench forms the back of the stand. Slopes are gentle to moderate. The soil is dry and is shallow to moderately deep to bedrock with occasional ledge. Site quality is excellent for pine and oak. Operability with machines is very good, except for in the small swamps. The stand was heavily cut about 40 years ago.



Stand 1 is a softwood stand with only a few scattered hardwoods. Cedar is most prevalent, followed by fir and white pine. Both hemlock and spruce have a modest presence. The growing space is roughly evenly divided among saplings, poles and sawtimber. The number of stems per acre peaks in the 4" diameter class. Trees range up to only 16+" in diameter, with an average of 5". Because of the past harvest, many saplings are open to the canopy. The total basal area is 158 ft<sup>2</sup>/acre, which is at the high end of being adequately stocked. Canopy height is mostly of moderate height. There are occasional taller residual pines, as well as drops in the canopy containing saplings. Closure of tree crowns is high.





Tree quality is fair. Both the fir and cedar rarely grow to become sawlog quality and size. Other hemlock and pines are pulp quality. The growth rate is about  $\frac{1}{2}$  cord per acre per year. Standing volume per acre is low with only 0.8 mbf of sawtimber (spruce), and 18 cords of pulp. Sawtimber volume comprises a low 8% of the total volume of commercial wood. Regeneration is primarily fir saplings.

### *RECOMMENDATIONS*

There are 2 options for the long-term management of this stand. With the high percentage of cedar (for both food and cover) plus the other softwoods, it can be managed for wildlife, particularly deer. Maintain a high density, such as the current stocking level. Leave alone for now, but re-evaluate in 10 years for possible commercial cut of the fir.

If the objective is timber production, structure goals should be lower, at about 110  $\text{ft}^2/\text{acre}$  of basal area and a largest diameter tree of 24". Manage on an uneven-aged basis. Preferred sawtimber species are pine and spruce. They only make up 14% of the stocking (22  $\text{ft}^2/\text{acre}$  of basal area). Commercial thinning and non-commercial weeding could be employed to remove most of the fir and cedar. A few cedar poles are probably sound enough for use as fencing, but it's a question whether there's enough to make a load. Some of the fir poles are also commercial, but they only add up to 3 cords/acre. Low priority.

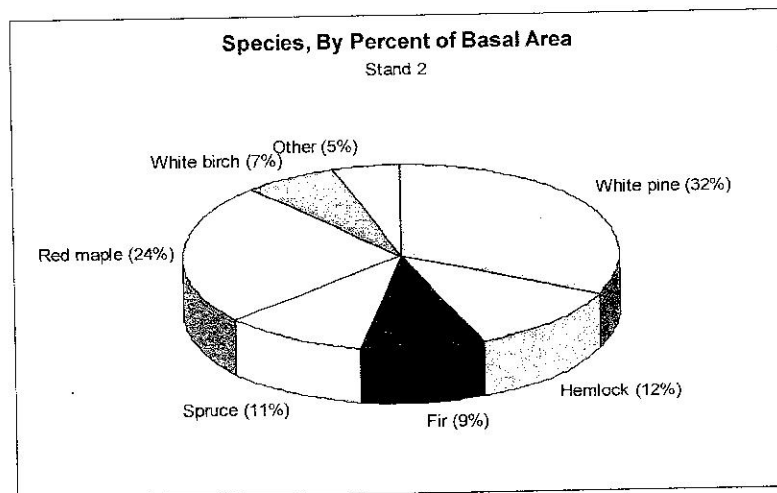
Cutting should be light, if at all, along the edge of the swamps.

Consider cutting a trail to extend from the town road into stand 4 at the northeast boundary.

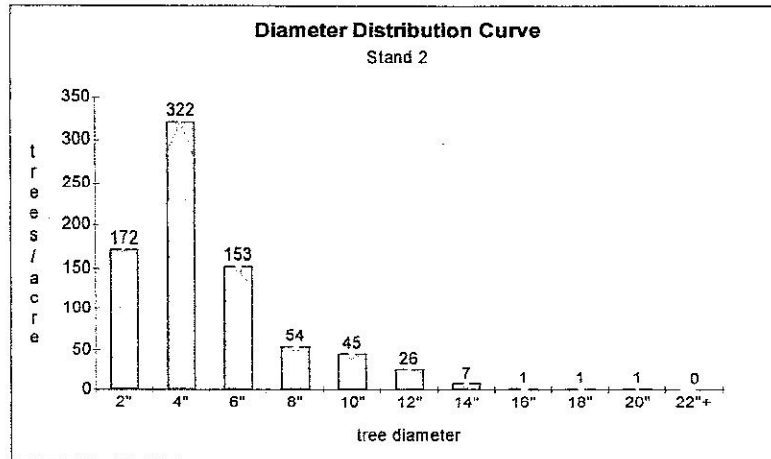
## STAND 2 - MIXEDWOOD POLETIMBER (M-2-A)

20 acres

Stand 2 is in 2 units. Stand 2a is behind stand 1. The wet run blocks easy access directly from stand 1. Physically, it would make better sense to enter stand 2a from the neighbor's old wood yard (with permission, of course). Stand 2b covers the back 1/3 of the property. Along with stand 6, direct access is blocked by the ravine. It would be best to come through the northeast abutter. The terrain in both units consists of gentle to moderate slopes, with occasional small ledge. The soils are shallow to moderately deep to bedrock and are dry, except for the occasional wet basin. Site quality is excellent for both pine and oak. Operability with machines is very good. Stand 2a was harvested about 15 years ago and stand 2b was harvested about 40 years ago. Although it doesn't seem to be accurate, the shoreland zoning map depicts the Newbert Pond swamp to run along the southwest boundary of stand 2b. The topographic map shows it more to the southwest. The 250' strip along the swamp is zoned as Resource Protection.



Stand 2 is a mixedwood stand. White pine and red maple are the dominant species. Associates are hemlock, spruce, fir and white birch. Small numbers of aspen and cedar are also present. Almost half of the growing space is made up of pole size trees. As a result of the past harvest, the stand is uneven-aged with stems of all sizes and variable stocking. Trees range from 2" to 20" in diameter, with an average of 6". The total basal area is 139 ft<sup>2</sup>/acre, but ranges 75-180 ft<sup>2</sup>/acre. Stocking for 6"+ dbh commercial stems is currently at the recommended level, with a basal area of 107 ft<sup>2</sup>/acre. Although variable, canopy height is mostly moderate with a few scattered taller pines. Tree crown closure is full.



Tree quality is fair to good. Many of the sawtimber stems are limby and low quality. Poles are a mix of acceptable stems and pulpwood. Growth rate is about  $\frac{1}{2}$  cord per acre per year. Wood volume is moderate at 25 cords of pulpwood and 5.2 mbf of sawtimber per acre. Sawtimber volume is 17% of total commercial wood volume, which is average. Regeneration is mostly fir saplings, but spruce dominates the north corner.

#### *RECOMMENDATIONS*

Long-term objective is timber production. Maintain an uneven-aged structure with a stocking of 100 ft<sup>2</sup>/acre basal area for 6"+ dbh stems. Favor pine and spruce and discriminate against fir and poor quality individuals through group selection and crop tree release cutting methods. Even though small groups can be thinned, a minimum volume is not there for a commercial harvest at this time. Let grow and re-evaluate in 10 years.

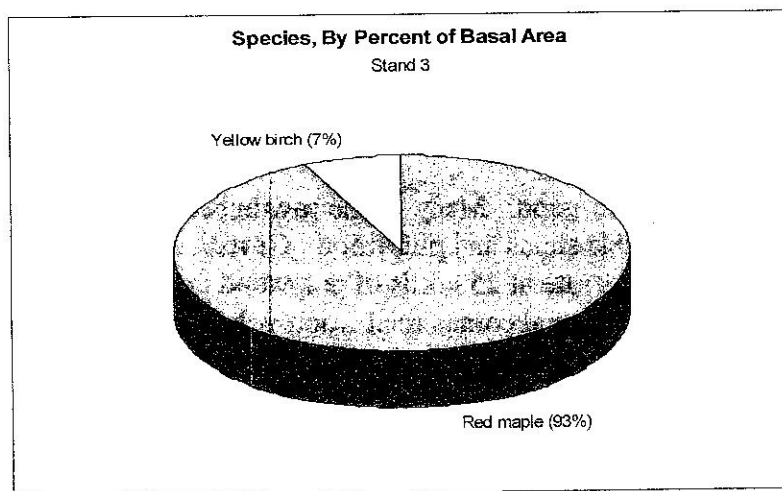
The open shrubby swamp and the wooded swamp (stand 3c) should be protected by a no-cut buffer strip of 25'. One should be cognizant that the Resource Protection Zone is mapped across the stand's east and southwest ends. The swamp and the zone should be delineated on the ground to confirm where harvesting restrictions apply.

Consider opening up a trail in old skid roads in order to connect the old skid road in stand 4 at the northeast boundary with stand 1.

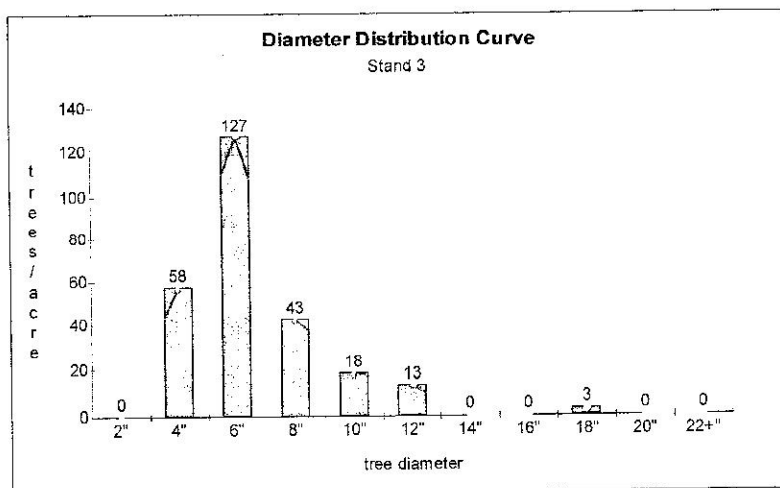
# STAND 3 - HARDWOOD POLETIMBER (H-2-B)

5 acres

Stand 3 is in 3 units. Stand 3a is behind stand 2a, where the lot widens. It is accessible through stands 2a and 4. Stand 3b is the ravine and stream that cuts through the middle of the lot. Access is difficult due to steep ledges on both sides. Stand 3c is adjacent to the southwest boundary, in the midway back in stand 2b. Stand 3 is a wooded swamp. The terrain is flat and soil is very poorly drained. Both site quality and operability are poor. No harvesting occurred here.



This hardwood poletimber stand is dominated by red maple. Yellow birch is an associate, with an occasional spruce, tamarack and pine. Trees range from 4" to 18" in diameter, with an average of 7". The total basal area is 70 ft<sup>2</sup>/acre. It is adequately stocked, at the low end near the recommended level. Both canopy height and crown closure are moderate.



Tree quality is poor. Except for a few acceptable stems, most trees are pulpwood quality. Growth rate is low, at less than  $\frac{1}{4}$  cord per acre per year. Standing volume is low with only 15 cords of pulpwood per acre and no sawtimber. Regeneration is mostly fir plus some spruce, tamarack and maple. Woody shrubs are common and thick in spots, notably alder and winterberry.

### *RECOMMENDATIONS*

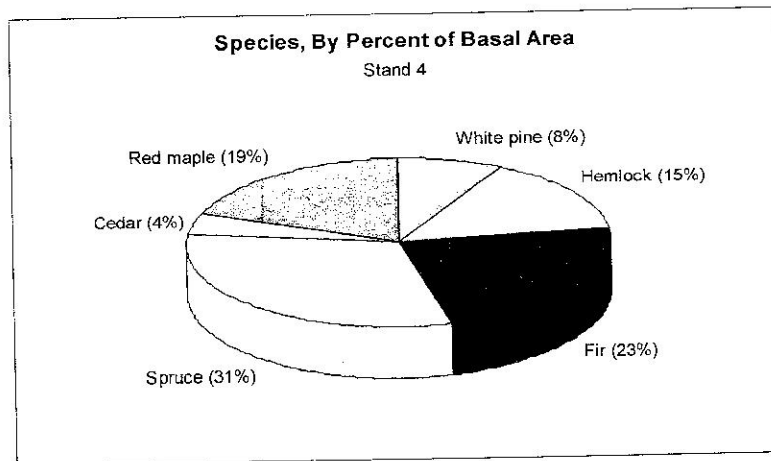
The long-term management objective is protection of the wetlands and stream for their intrinsic ecological function and beauty, as well as wildlife habitat value.

Stand 3 should be left undisturbed and left to develop naturally.

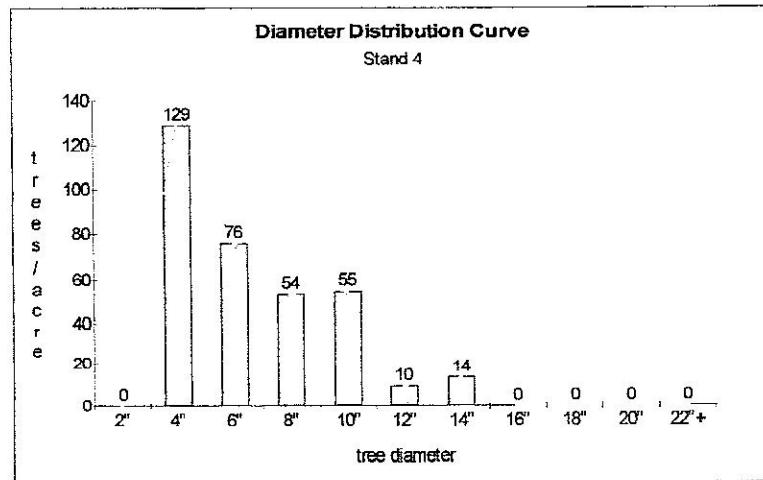
## STAND 4 - SOFTWOOD POLETIMBER (S-2-A)

8 acres

Stand 4 is west of stand 3a, in the wide mid-section of the property. It is accessible from stand 2 across wet ground along the north boundary. Before the larger ownership was broken up, a skid road accessed stand 4 from lot 11 of Phase II West Appleton Subdivision, to the southeast. The ground is gently to moderately sloping. The soils are shallow to moderately deep to bedrock and are dry. The seasonal stream that drains stand 3a flows through the northeast part of the stand. Site quality is excellent for both pine and oak. Operability with machines is very good. There are several overgrown skid roads. Stand 4 was harvested about 15 years ago.



Stand 4 is a softwood poletimber stand with spruce and fir comprising more than half the growing space. Also present, in decreasing order, are red maple, hemlock, white pine and cedar. The number of stems is highest in the 4" diameter class. Trees range from 4" to 14" in diameter, with an average of 7". It is even-aged. The basal area is 98 ft<sup>2</sup>/acre for all stems. For commercial size 6"+ diameter trees the average diameter rises to 9" and the basal area drops to 86 ft<sup>2</sup>/acre. This puts the stocking of commercial trees below the minimum level for a softwood stand. It is understocked. Due to the past cut, canopy height and density are variable. Canopy height is moderate and crown closure is high.



Quality of the canopy trees is fair to good. There are some acceptable sawtimber spruce, pine and hemlock. Fir is not considered acceptable growing stock for sawtimber. The maple is pulpwood. Some roadside trees had been damaged on their butts from the past logging. The growth rate is good, but with the low wood volume, new wood is accumulating at about  $\frac{3}{4}$  cord per acre per year. Standing volume is low with 19 cords of pulpwood and 1.7 mbf of sawtimber per acre. Fir regeneration is common.

### *RECOMMENDATIONS*

Long-term objective is timber production. Maintain an even-aged structure for the foreseeable future (at least 40 years) with a stocking level equal to the B-line of the spruce-fir stocking guide (115+ ft<sup>2</sup>/acre basal area for canopy stems). Favor spruce, pine and hemlock over fir and poor quality individuals through group selection and crop tree release cutting methods. Let grow and re-evaluate in 10 years.

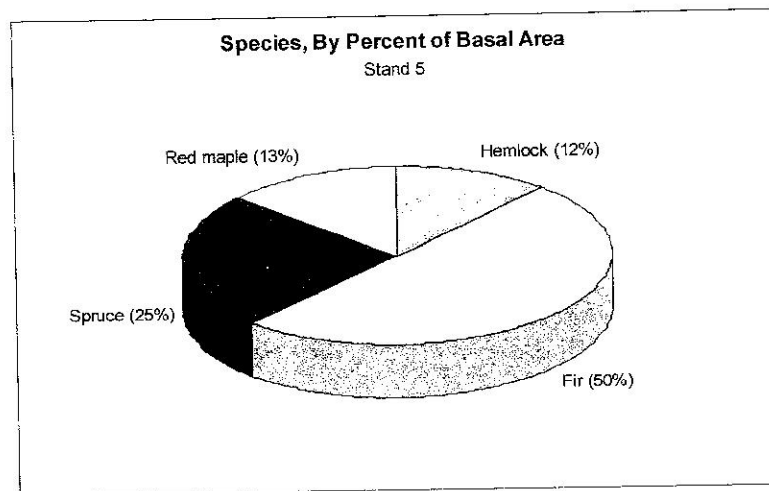
The wooded swamp (stand 3a) should be protected by a no-cut buffer strip of 25'. The Resource Protection Zone is mapped across the stand's east side. The Newbert Pond swamp and the zone should be delineated on the ground to confirm where harvesting restrictions apply.

It would be nice to open up a trail along some of the old skid roads, except that 2 of them lead off the property. The road that ends at the northeast boundary can possibly be continued through stands 2a and 1 and out to the town road.

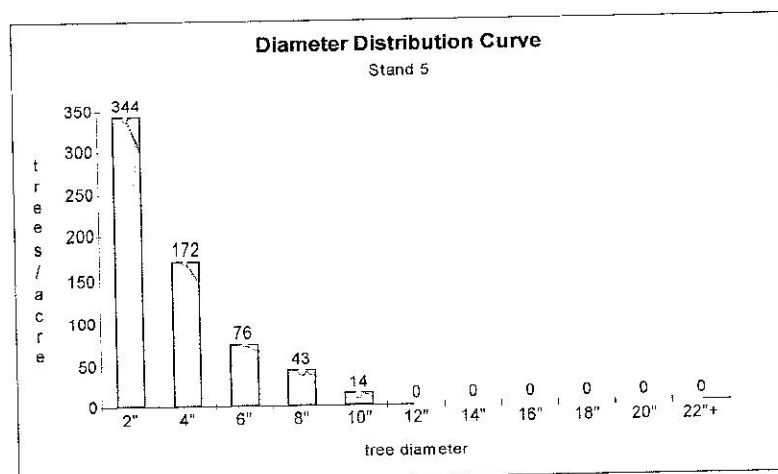
# STAND 5 - SOFTWOOD POLETIMBER (S-2-C)

3 acres

Stand 5 lies to the west of stand 4 and adjacent to the ravine. It is accessible through stand 4 by the old skid roads. The terrain is gentle in the south and moderate in the north. The side of the ravine is steep. The soils are shallow to moderately deep to bedrock and are dry. Ledge is common. The seasonal stream that drains stand 3a flows through the northeast part of the stand on its way down to the ravine. Site quality is excellent for both pine and oak. Operability with machines is good. There are several overgrown skid roads. Stand 4 was heavily logged about 15 years ago. The Resource Protection zone is mapped across the south half of the stand.



Stand 5 is a softwood stand that is regenerating. Only scattered of poles are left in the upper canopy but the lower level is thick with saplings. Half of the growing space is fir. Spruce, hemlock, maple and white birch make up the balance. Trees range from 2" to 10" in diameter, with an average of only 4". The basal area is 60 ft<sup>2</sup>/acre for all stems. Stocking is adequate, being just above the recommended level. Upper canopy height is moderate and crown closure is low.





Tree quality in the stand is poor. Many of the overstory stems are pulpwood grade. Fir is not considered acceptable growing stock for sawtimber. Growth rate is good, but the base wood volume is low, only 9 cords of pulpwood per acre and no sawtimber. Regeneration is thick with fir and spruce, plus some white and gray birch in the more open spots.

The thick saplings serve as good rabbit habitat and, in fact, a snowshoe hare was spotted during the field cruise. The stream is a valuable corridor connecting 2 wooded wetlands.

### *RECOMMENDATIONS*

Long-term objective is timber production and wildlife habitat. Maintain an even-aged structure for the foreseeable future (at least 40 years) with a stocking level equal to the B-line of the spruce-fir stocking guide (for example, 65 ft<sup>2</sup>/acre basal area for 5" average diameter, increasing to 130 ft<sup>2</sup>/acre basal area for 10" average diameter). Favor the spruce over fir and poor quality individuals. Let grow and re-evaluate in 10 years.

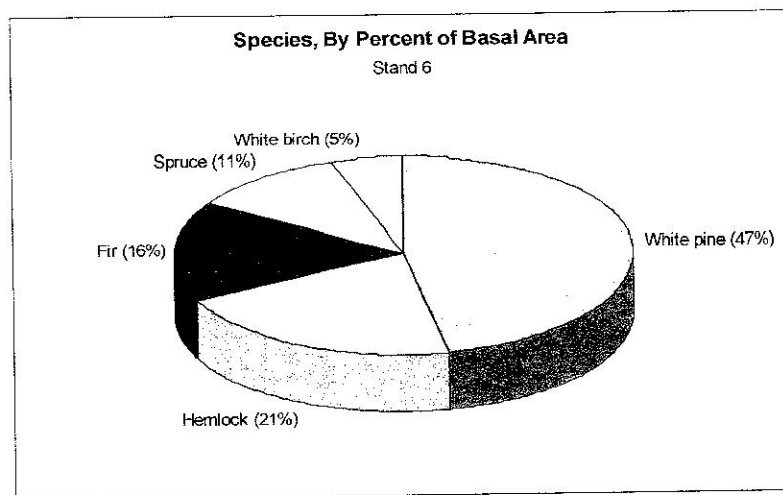
The ledgy side of the ravine should not be cut to serve as a protective zone for the wooded swamp (stand 3b). The seasonal stream also should have a no-cut buffer strip of 25' on either side of it. The Resource Protection Zone is mapped across the stand's east side. The Newbert Pond swamp and the zone should be delineated on the ground to confirm where harvesting restrictions apply.

Consider extending a trail system through stand 5, either simply looping back into stand 4 or down the ledges and across the ravine.

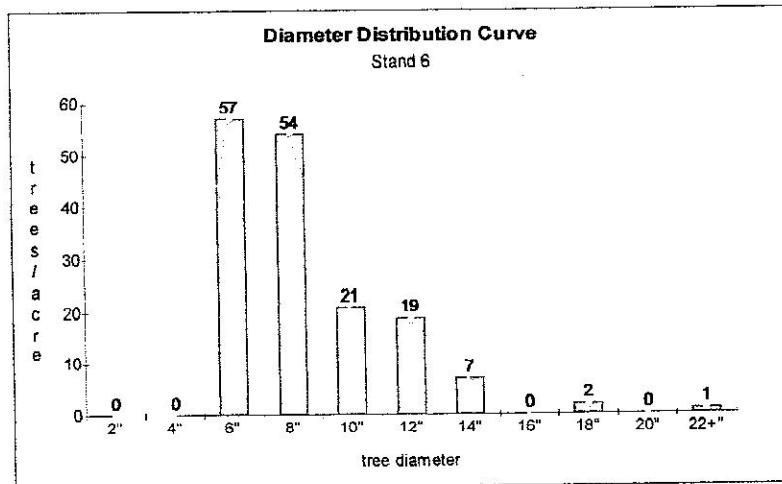
## STAND 6 - SOFTWOOD POLETIMBER (S-2-B)

6 acres

Stand 6 is on the west side of the ravine, in the back half of the property. Stand 2b and a shrub swamp borders on the west. Access across the ravine with machines is difficult. A woods road that runs across the width of the stand provides easier access from both neighbors. Since the south neighboring lot is swampier, it would make more sense to enter the stand from the north neighbor. Terrain undulates with gentle to moderate slopes. Soils are shallow to moderately deep to bedrock and dry. Occasional ledge is exposed. Site quality is excellent for both pine and oak. Operability with machines is very good. Stand 6 was harvested 20-40 years ago. The shoreland zoning map depicts the Newbert Pond swamp extending a bit into the west end of stand 3b (the ravine). The 250' strip in stand 6 along the swamp is zoned as Resource Protection.



This softwood stand is dominated by white pine. Associates include hemlock, fir, and spruce. White birch is a minor species. The main canopy is composed of both poles and sawtimber. Small patches of seedlings/saplings remain from the past harvest. Trees range up to 22" in diameter, with an average of 9". Stocking is variable ranging from dense pockets to open areas. The total basal area is low, averaging 71 ft<sup>2</sup>/acre. On average, it is understocked. Both canopy height and crown closure are moderate.



Tree quality is generally fair. There is a mix of acceptable stems and those that are only pulpwood quality. Several of the white pines have been weeviled and are limby with multiple stems. The past cut has spurred the growth rate to 1 cord per acre per year. Standing volume is somewhat low, especially for a softwood stand. There are only 15 cords of pulpwood and 1.5 mbf of sawtimber per acre. The sawtimber is 16% of the total wood volume, which is average. Regeneration is mostly fir and spruce, some plus red maple sprouts, hemlock and white pine.

### *RECOMMENDATIONS*

Long-term objective is timber production. Maintain an uneven-aged structure with a minimum stocking level of 110 ft<sup>2</sup>/acre basal area for canopy stems. Favor the better quality pine, spruce and hemlock through group selection and crop tree release cutting methods.

The current stocking is below the target level. Let grow and re-evaluate in 10 years.

The open shrub swamp and the wooded swamp (stand 3b) should be protected by no-cut buffer strips of 25'. The Resource Protection Zone is mapped along the ravine's west end. Some cull wildlife trees should be left.

If desirable, extend a trail through the stand as part of a property wide system.

## CONCLUSIONS

Except for the wooded swamps of stand 3 and the shallow ledgy spots, the lot has excellent timber production sites for white pine and red oak. Site quality is fair to good for hardwoods and spruce. Direct access behind the ravine is difficult and is even challenging for areas in the front half. Permission to cross the north abutting lot should be pursued. No management activities are recommended for the next 10 years. Except for trail building and boundary line maintenance, the lot should be left alone and re-evaluated in 10 years. A 75' no-cut zone along the mapped wetland plus a 40% harvest limitation must be observed within the Resource Protection Zone. Recreational use and aesthetic enjoyment of the property by the public should continue and possibly encouraged.

SUMMARY OF MANAGEMENT PRIORITIES 2001-2011			
Year	Stand	Activity	Estimated Income/(cost)
2001-11	1, 2, 4-6	Trail establishment, as desired	(\$?)
2010	All	Blaze and paint all lines (8,774')	\$430
2011	All	Update management plan	(\$?)